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parodos, it turns by the corner of the stage-building at an oblique angle to the southeast, in the direction where the ground is lowest. It is formed of rectangular pieces of red tile open above (*Fig. 5*), not fitted into one another, but set close end to end and bedded in the ground. The tiles are 0.63 m. long, 0.24 m. broad, and 0.265 high. The drain was covered with separate flat pieces a little wider than itself. The tiles are 0.03 m. thick.

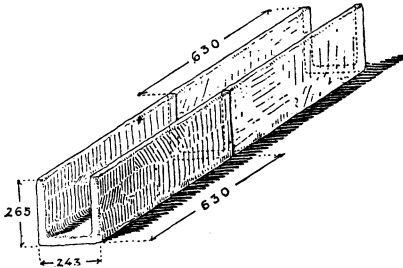


FIG. 5.—*Drain.*

In closing, I would observe that I came independently to the results set forth while directing the excavation of the theatre. It was no small delight to find, on my return to Athens, that Dr. Dörpfeld approved of the plans which I had drawn, and later, when he

visited the theatre, that he corroborated my views, making changes only in minor details. At the same time I must not omit to mention the kindly assistance Dr. Dörpfeld has rendered me in several instances, and the friendly interest he has taken in the work.

ANDREW FOSSUM.

V. THE THEATRE AT ERETRIA. ORCHESTRA AND CAVEA.

In the work of the School at Athens at Eretria, Dr. Waldstein assigned to me the clearing of the *cavea*, orchestra, and *parodoi* of the theatre. This was pursued so far as to determine the level and extent of the orchestra, to follow the lowest row of seats and the bounding-curb of the orchestra from the middle to the eastern *analemma*, and to define, rather imperfectly, the eastern *parodos*. To this must be added the discovery of a most interesting underground passage, extending from about the centre of the orchestra to a point just within the later proscenium-wall. At Dr. Waldstein's suggestion, excavation was carried on also through the *débris* surrounding a lime-kiln near the theatre, but without result.

Work in the orchestra was begun on Feb. 24, with a trench a little more than 1 m. wide, perpendicular to the proscenium at its middle point. Very few fragments were found either in marble or in poros, until, on the second day, at a depth of about 0.70 m., two large poros

blocks came to light lying side by side at a slight angle in the direction of the trench. On digging further toward the stage, it was found that these two blocks made part of an unbroken line of poros, the covering, as it seemed, of a drain or passage of some kind. These stones were carefully laid and the whole structure was very well preserved. Only the corners were sometimes broken away, so that, at one point, the workmen could thrust their pick-handles through and down to the full length. Almost covering the open end of this passage was found a cornice-slab of marble; close by, fragments of marble triglyphs and dentils. When all these were cleared away the existence of a subterranean structure was made certain.

The work at the upper end of this main trench was carried considerably further before anything of importance was discovered. Only one or two blocks of poros and some small pieces of marble came to light. At length the workmen uncovered, at a depth of 1.05 m., what proved to be one of the seats of the lowest tier of the *cavea*. Very soon the line of poros curb bounding the arc of the orchestra was found, 0.20 m. further below the surface. Immediately below the first tier of seats was a broad step serving as a foot-rest for those who sat above, and between this and the curb was a sunken drain paved with poros. Just behind the first seat discovered was a flat, irregular marble slab of considerable size. Toward the west the line of seats was broken, and in digging further up the hill nothing more was found *in situ*. The *cavea*, here at least, was in an altogether ruinous condition, so that the main trench at this end was abandoned. At Dr. Waldstein's suggestion, the digging was now carried along the line of the first row of seats toward the east. A trench was sunk broad enough to include also the curb of the orchestra. All was in a fairly good state of preservation, only a block from the line of seats being missing now and then. A number of marble fragments were found, evidently belonging to thrones. The sunken drain proved to be divided at intervals by very ill-made and irregular cross-walls, resting on the poros bottom, and not quite reaching the level of the curb and the lowest step on either side. The end of the curb was reached some 5 m. before coming to the *analemma* of the *cavea*. At this point the curb was connected with the lowest step by a very good cross-wall of the same pattern and period with itself. Digging was carried for a short distance along the *analemma*; this was very much broken away, and the blocks which made it were heaped together with seats that had fallen from above. The wall of the *parodos*, so far as it was found extant at all, was yet more ruinous. I had

hoped to carry a trench from the orchestra to the uppermost rows of seats, but lack of time prevented this.

Meanwhile, the subterranean passage mentioned had been entirely cleared. The work had been necessarily slow, since in so confined a space only one man could dig at a time, and very awkwardly. Besides, the interior was a closely packed mass of architectural fragments, as drums of columns, with pottery, Roman lamps and other objects. A discovery of importance was made near the north end of this passage. Here the digging was carried more than 1 m. below the ancient level of the orchestra. At this depth part of a marble chair was found, imbedded among loose stones and smaller bits of marble; there was found also a rounded fragment of poros, belonging to the base either of a column or of a statue.

THE CAVEA.

In 1833, according to Ross,¹ some of the stone seats of the *cavea* were still to be seen. He seems to imply that when he visited Eretria eight years later these had disappeared, appropriated by the new settlers as building-material. When our work began, at least two or three seats of the ordinary pattern lay above ground on the upper part of the slope. Nothing whatever was visible besides these, though the general form of the *cavea* was still very clearly marked. The seats were not laid on a natural slope, as is generally the case, but were supported by an artificial mound of earth as noted by Ross (*op. cit.*) This method of construction was rare in Greece proper, but obtained in the theatre at Mantinea, lately excavated by the French School.² Durm³ mentions only the theatres at Alabanda (Asia Minor) and Mantinea as so constructed. More are enumerated by Müller,⁴ but only in Macedonia and Asia Minor. Recently it has been found that the theatre at Megalopolis rested in part upon an artificial embankment.⁵ The embankment at Mantinea was supported by a polygonal wall, and the theatre was made accessible from the rear by a system of external flights of steps; but no attempt could be made to ascertain whether this was also true at Eretria. The *cavea* opens toward the south in direct violation of Vitruvius' injunction;⁶ but this is the case also at Athens and Syracuse.⁷

¹ *Wanderungen in Griechenland*, II, 117.

² *Bull. de corr. hellén.*, XIV, 248.

³ *Baukunst der Griechen*, 211.

⁴ *Bühnenalterthümer*, 30, n. 2.

⁵ *Journal of Hellenic Studies*, XI, 294.

⁶ *De Architectura*, v. 3. 2.

⁷ GEPPERT, *Altgriechische Bühne*, 94.

At present the greatest height of the *cavea* above the orchestra-curb is 9.07 m.;⁸ its diameter measured from the highest point of the mound on either side is 81 m.; measured from the lowest step on either side, 24.88 m. The structure forms an arc of 186° , or somewhat more than a half-circle, and is thus less by 24° than Vitruvius' fanciful model for Greek theatres. The curve seems a perfect one through an arc of 159° , *i. e.*, to the point where the curb terminates. It is then continued on a straight line, tangent to the arc at that point. This was a device often employed in Greek theatres⁹ for the sake of the view of those who occupied the end seats. At Epidauros¹⁰ the same purpose was accomplished by the use of a different centre and radius, thus making the inward curve at the wings less abrupt. The *analemma* uncovered is of the same poros stone used for the seats and throughout in the whole structure. The wall follows the upward inclination of the *cavea* and is 0.62 m. thick at the bottom, narrowing to 0.57 m. at the highest point reached in the digging. At its lower end the base of a stele was discovered, lying in a line with the lowest step of the *cavea* and so at an obtuse angle to the *analemma*. It is rectangular, 1.14 m. in length and 0.62 m. in width. The hole sunk in the upper face to receive the stele is 0.79 m. long, 0.135 m. wide, and 0.12 m. deep. Doubtless the stele bore an inscription relating to the building or rebuilding of the theatre. The lines of the *analemmata*, if prolonged, would meet in an obtuse angle at a point between the centre of the orchestra and the proscenium—another characteristic of the normal Greek theatre. The width of the east *parodos* is about 5 m. The proscenium in its prolongation toward the east bends away slightly, as at Epidauros and Oropos. But we could not make sure whether this prolonged line was parallel with the *analemma*, or whether, as is most frequently the case, the inclination was such that the *parodos* became wider as it approached the orchestra. Neither was it possible to determine whether the *parodos* was closed by a door or doors, such as were found at Oropos, Sikyon and Epidauros.¹¹

The *cavea* is divided into eleven *cunei* ("wedges") by twelve flights of steps. This statement is founded on computation, for only

⁸ I am glad to acknowledge my indebtedness, for many of these measurements and for helpful suggestions, to Mr. John Pickard of the American School.

⁹ Cf. the theatre at Athens; for that at Peiræus, see CURTIUS and KAUPERT, *Karten von Attika*, text, I, p. 67.

¹⁰ *Πρακτικά* for 1883, 47.

¹¹ *Πρακτικά* for 1883, 48; for 1886, 53.

three of these flights of steps were definitely located. According to Vitruvius,¹² the *cunei* should be seven and the stairways eight in number. But in Greece proper this rule is observed only at Mantinea. At Argos and Thorikos we find only three *cunei*. The number is generally greater than that given by Vitruvius.¹³ The eastern *analemma* is immediately adjoined by steps; this must have been the case at the other extremity of the *cavea* also. Such an arrangement is indeed almost universal. The *cavea* was not divided through the middle line by a line of steps, nor is it at Athens and at Sikyon. This division, despite Vitruvius, was, of course, a quite accidental matter, depending upon the number of *cunei*, whether even or odd. The stairway next the *analemma* is 0.72 m. in breadth at the bottom, narrowing with the second step to 0.68 m. Beyond this no exact measurement could be taken on account of the ruinous condition of the remains. The breadth corresponded approximately to that found in the theatres at Athens (0.70 m.), Epidauros (0.74 m.) and Thorikos (0.62 m.). It is considerably exceeded, however, in the steps of the the following flight, which measure 0.94 m., corresponding nearly to the 0.90 m. of the Peiraieus theatre. This increased breadth is natural for the interior, where every stairway gave access to two *cunei* instead of one. The height of the steps varied between 0.145 m. and 0.16 m.; to this must be added a decided upward slope from front to back. So far as could be seen, the level of seats and that of adjoining steps correspond only occasionally, the added height of four steps amounting to that of three rows of seats. This, I think, is quite exceptional. It is an almost invariable rule that every second step reaches the level of the adjoining seat. Only in the theatre at Athens does a single step, inclining upward from front to back, suffice for every row of seats.

The seats themselves vary greatly in dimensions. Those above ground on the upper part of the slope are 0.39 m. in breadth and 0.54 m. in height; those in the lowest row have, as a rule, the same breadth—sometimes 0.05 m. to 0.08 m. greater,—but are only 0.32 m. in height. In profile, there are only slight differences in measurement, not affecting the general pattern. This is a usual one for theatre-seats, and consists of a plane vertical surface reaching 1.05 m. below the upper surface and continued down to the bottom of the seat

¹² V. 6.2.

¹³ Cf. Athens, Epidauros, Sikyon, Peiraieus.

in a *cyma reversa* curve forming a hollow. The concave surface at its deepest point is distant 0.105 m. from a vertical line let fall from the upper outer edge of the seat. The seats are set level, and have a slightly raised band, 0.09 m. to 0.13 m. wide, running along the outer edge. The small breadth of the seats is, so far as I can find, quite unprecedented. Vitruvius' maximum and minimum are 0.7392 m. and 0.5914 m.,¹⁴ and his maximum is most often exceeded. In the theatre of Thorikos, which is very irregular, the average breadth is 0.60 m.;¹⁵ at Athens, it is 0.782 m., at Epidaurus 0.78 m., at Sikyon 0.75 m. to 0.85 m., at Peiraieus 0.91 m. But it is to be noted that in all these theatres, except at Thorikos, only a small part of the breadth served as the actual seat; behind, the stone was hollowed to receive the feet of those on the next step above. The front part or seat proper is 0.332 m. wide at Athens, 0.35 m. at Epidaurus, Sikyon and Peiraieus. These latter measurements harmonized better with the seat-breadth in the Eretrian theatre, and appeared to suggest that here the whole surface of the seat was given up to the actual occupant. Such was proved to be the case by further excavation. The seats are not so placed that one rests upon or touches the next, but are distant from one another radially 0.35 m. The intervening space, left for the feet of those who occupied the higher seat, is simply earth. Doubtless its level was below that of the seat in front, just as in theatres where one stone served as both seat and foot-rest. A *cavea* so constructed would be much less secure than if every row were supported immediately by the one below it; so that this detail of construction may account in a measure for the very imperfect preservation of the whole.

As to the difference in height (0.22 m.) of the upper and the lower seats, it may be remarked that, as the former were entirely above ground, a more exact measurement was possible. When the stone was set, some part of this excess of height would disappear, but surely not the whole. In fact, the entire height of one seat in the second row, whose lower edge seemed to have been reached, was only 0.42 m.; this would mean that the stone was sunk to a depth of 0.10 m. below the surface. In comparing the 0.32 m. of the lower rows with the seats of other theatres, we find: at Athens, 0.32 m.; at Epidaurus, 0.34 m.; at Sikyon, 0.35 m.; at Peiraieus, 0.32 m.; at Thorikos, 0.35 m. Here, then,

¹⁴ MÜLLER, *Bühnenalterthümer*, 31.

¹⁵ *Papers of American School*, IV, 9.

is a comparatively exact correspondence, all the figures being below Vitruvius' minimum of 0.3696 m. Seats so low could hardly have been very comfortable; and, for the theatre at Athens, Dörpfeld assumes that the height was increased by the use of cushions. The same opinion is expressed by Kabbadias in his report of the excavations at Epidauros.¹⁶ But it is interesting to find that at Epidauros the seats above the *diazoma* reach a height of 0.43 m. If at Eretria the upper seats also were set down in the earth to a depth of 0.10 m., the actual height remaining would be 0.44 m., or almost exactly the same as that in the great theatre of Polykleitos. The inference would seem to be that the theatre at Eretria was divided by a *diazoma*, as would be expected *a priori*. The marble slab before referred to, discovered just behind the first row of seats, may have made part of the back revetment of the *diazoma*. It is 1.62 m. long, 0.795 m. wide, and 0.185 m. thick; near one corner on the short side is a hole for the insertion of a clamp that joined it to its neighbor. The *diazoma* was not infrequently revetted at the back with such plates of marble.¹⁷ Only further excavation, however, can make this point certain. Finally, beneath the lowest tier of seats was a single step, 0.77 m. wide, and rising gradually from front to back; immediately adjoining, 0.38 m. lower, is the broad drain skirting the orchestra.

THE ORCHESTRA.

The diameter of the orchestra, measured to the poros curb which skirts it, is 20.28 m.; to the lowest step of the *cavea*, 24.88 m. It is larger than that of the theatres at Peiraieus (16.50 m.), Sikyon (about 20 m.), and Mantinea (21.70 m.); larger even than that of those at Athens (22.50 m.) and Epidauros (24.50 m.),—though in the last two theatres the size of the *cavea* is very much greater than at Eretria. The ratio of orchestra diameter to *cavea* diameter in the Eretrian theatre is an unusually large one. The orchestra was certainly unpaved. As late as 1886, Müller¹⁸ writes of the orchestra surface as *Fast ohne Ausnahme gepflastert*; he cites as exceptions only the odeum at Knidos and the theatre at Epidauros. But in the theatres at Peiraieus, Oropos, Sikyon, Thorikos, Mantinea and Megalopolis, the orchestra surface has been found to consist merely of beaten earth. Kabbadias¹⁹ in his

¹⁶ Πρακτικά for 1881, Παράρτημα, 17.

¹⁷ Cf. the theatre at Sikyon, in *Papers of American School*, v, p. 11 (JOURNAL, v, p. 277).

¹⁸ *Bühnenalterthümer*, 37.

¹⁹ Πρακτικά for 1881, Παράρτημα, 19.

report of the work at Epidauros concludes that paving was not in use in the best times. The pavement of the orchestra at Athens, for example, is certainly of Roman date. Perhaps the converse of Kab-badias' proposition will not hold: that the lack of paving implies an early time; but it may at least be regarded as an indication. The orchestra was in part bounded by the line of curb already often referred to. This consists of large blocks of poros, bearing a slight projecting moulding on the outer (next the *cavea*) side. It is 0.42 m. in breadth and rises 0.395 m. from the drain or gutter outside it; thus it is nearly on a level with the lowest step on the other side of the drain. It rises very slightly from the middle toward the extremities, the resulting difference of level amounting to 0.067 m. On the outer side the curve is perfect; inside the blocks are not cut to the curve but are left straight. This makes it certain that the orchestra surface was at least as high as the level of the curb. The upper surface of the stylobate of the proscenium-wall is 0.38 m. above the curb, and it is this stylobate which we might expect to determine approximately the level of the orchestra, which, if just high enough to conceal the lower edge of the stylobate, would be about 0.25 m. above the surrounding curb. The joinings of the curb are everywhere perfect, and the workmanship good. It extends through an arc of 159° , thus falling short of the angular measurement of the *cavea* by 27° . Therefore, for a distance of 5.35 m. at each end, the lowest step of the *cavea* immediately adjoins the earthen surface of the orchestra. At a distance of 1.62 m. from its extremities the curb narrows abruptly (at the jointing of two stones) to a breadth of 0.25 m. The narrowing is all on the inner side; the moulding and the curve on the outside continue unbroken. Finally, it is joined with the lowest step of the *cavea* by a radial cross-wall of the same pattern, 0.29 m. in width.

The sunken drain or passage left between the curb and the lowest step is 1.88 m. wide at the middle, increasing very gradually to 1.90–1.91 m. at the eastern extremity; it is well paved throughout with poros. That it served as a drain was made sure by the discovery, outside the cross-wall, of a conduit of pottery. This was very small (0.235 m. wide, 0.15 m. deep), and consisted of a flat plate bent to form a rectangular prism; it was open above and lay somewhat below the level of the *cavea*-drain. A hole was discovered piercing the cross-wall at the bottom, through which water might pass into the outer conduit. This conduit extended toward and under the stage-structure, bending

gradually toward the east. This whole plan and arrangement is closely similar to what was found at Epidauros. At Athens the orchestra is surrounded by a drain, which is, however, much narrower (0.90 m.) and deeper; so that bridges were necessary in the line of every stairway. The same narrow and deep canal with a succession of bridges, is found at Sikyon and at Peiraieus; at Megalopolis its dimensions are about the same, but the bridges, if there ever were any, have disappeared. In every case the drain is carried on in some way under the stage-structure. At Epidauros, the narrow gutter is replaced by a broad and shallow paved passage, very nearly corresponding in its measurements to that at Eretria. A curb with similar moulding bounds it on the inside, and at about the extremities of a diameter parallel to the proscenium are cross-blocks uniting the curb with the lowest step of the *cavea*. These are pierced each by two apertures affording an outlet into a subterranean drain which runs away under the stage-structure. At Epidauros, however, the circle of the curb is made complete instead of being interrupted at the cross-walls. As Kabbadias suggests,²⁰ Polykleitos' great work might well have served as a model to later designers. The theatre at Aigina, according to Pausanias,²¹ resembled it in size and structure.

I have already noted the existence of three ill-made and ruinous cross-walls in this drain. The first lies about 0.50 m. to the east of the middle point of the curb, is 1.60 m. long, 0.37-40 m. wide, and 0.35 m. high. Space enough is left between each end and the adjoining side-wall of the drain, for water to pass freely. The second, 5 m. further toward the east, is of about the same length and height, but slightly wider. The third, lying 3.65 m. from the second and 3.90 m. from the cross-curb at the end, extends but half-way across the drain, and is very much wider (0.85 m.) than the other two. My first thought was that the cross-walls had served to support bridges corresponding to the stairways. But they lie at such irregular intervals that this could hardly have been the case (the distance between adjacent stairways along the lowest tier of seats is 3.29 m.); and in any event bridges so short would not have needed a continuous support. It seems most reasonable to suppose that the drain was in later times completely covered, and that the cross-walls made the foundation for such covering. They appear to be late, and from their height would be very well suited to

²⁰ Πρακτικά for 1881, Παράρτημα, 29.

²¹ II. 29, 11.

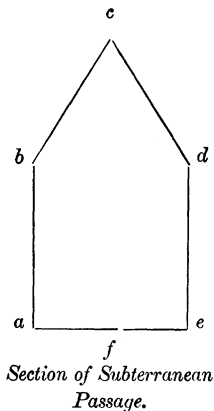
the object suggested. The reason of this covering may have been to obtain space for a row of marble chairs or thrones. If the chairs were not here, they could have had no other place except within the orchestra itself, where they are found at Oropos, just across the Euripos from Eretria, but, I think, nowhere else in Greece. The two theatres might very well have been similar in this respect. The fragments of thrones which were found seem to shed light on the matter. All along the course of the drain were unearthed large and small pieces of marble which certainly belonged to thrones. Finally, at the east end, the back of a throne was found entire, lying on the poros pavement of the drain. It corresponded in style and measurement to the smaller fragments. In addition, we discovered, as already noted, near the centre of the orchestra, at the north end of the subterranean passage, the arm of a marble chair, lying about 1 m. below the ancient level of the orchestra. It differed entirely from all the rest in dimensions and pattern. Mr. Leonardos, the superintending Ephor at Eretria, judged it of earlier and better work than the more numerous fragments. It may have belonged to a period earlier than the construction of the underground passage, and at this earlier time the thrones may have stood within the orchestra, as at Oropos. In the construction of the passage a deep trench must have been sunk and naturally prolonged somewhat beyond its northern extremity; in the hole thus left this fragment of a throne might well have been buried together with other *débris* from the old structure. I should ascribe the later thrones to the period of rebuilding thus indicated; these might then have been placed over the drain which was covered to receive them. But all this is a matter of conjecture from very incomplete data.

The arc of the orchestra, if taken at the poros curb inside the drain, just cuts the line of the later proscenium, but falls short of the heavy front-wall of the older stage-structure. The curve of the lowest step, if prolonged, cuts the earlier wall as well. This latter circle is the basis of Vitruvius' plan; and in this respect the theatre at Eretria, like most others, chances to accord with the Roman architect's theory.

THE UNDERGROUND PASSAGE.

The position and direction of the underground passage have already been described. Its total length is 13.09 m.; breadth at the bottom (*a-e* in section) 0.89 m.; height (*c-f*) exactly 2. m. It is formed of two tiers of very large blocks carefully fitted together, no one of

them varying in length so much as 0.05 m. from 1 m. The stones of the lower course are set vertically and are 1.10 m. high ($a-b$, $e-d$). With the second course ($b-c$, $d-e$), the two side walls come together, making an angle at the top of 60° . There is no cap-stone, and nothing of the arch-construction; the stones rest against each other merely by the contact of their inner uppermost edges, and the outer edges, which might otherwise project above the level of the orchestra, are cut away so as to lie just beneath the old surface. The passage is covered in this way along 11.03 m. of its entire length. At both ends the last stone of the upper course on each side rises vertically, instead of sloping to meet its fellow. These stones vary slightly in dimensions. All are 0.85 m. in height; but, at the north end of the passage, the block on the east side is 1.07 long, its opposite 0.99 m., and at the stage end,



the one to the east is 1.03 m., that to the west 1.08 m. long. These differences are scarcely noticeable except on actual measurement. At the north end every stone is 0.15 m. wide at the top; at the stage end the total width is 0.33 m., but on the inside there is a sunken ledge 0.05 m. deep and 0.15 m. wide. This disposition was evidently planned to receive a trap-door which should cover the opening. At the north end there is a suggestion of an intended covering in two small cavities corresponding to each other in the last two stones that are joined to roof the passage; but it is difficult to see just how these cavities could have contributed to the purpose in question.

Thus was afforded entrance to the passage at the centre of the orchestra and just behind the *proscenium*. It was facilitated by steps constructed in a noteworthy and unusual manner. At either end a huge block of poros was set in, resting on the same level as the side stones of the lower course, and corresponding to them in height. It was so wide that its middle portion could be cut into steps equal in breadth to the passage, while the side portions thus left standing free bounded the continuation of the passage in the line of the regular blocks of the lower course. This block furnished three steps. Upon it and between the vertical side stones of the upper course, which form the opening, was placed another huge block, which was cut out in three more steps in the same way. Thus a stairway was formed

extending from the upper outer corner of the vertical side stones to the bottom of the passage. At the stage end all these six steps are perfectly preserved; at the north end only the lower block, with its three steps, remains. The missing portion, however, may easily be restored. The line of inclination of the lower steps, prolonged by the length of a second block, exactly reaches the corresponding corner of the upper side stones. It is, of course, possible that the missing steps may have been of wood, or for some reason may not have been necessary at all. The steps at the stage end are 0.83 m. long; at the north end 0.87 m.; in both cases 0.12 m. less than the width of the blocks in which they are cut. A ledge 0.06 m. wide is thus left on both sides of the steps. The steps are 0.17 m. wide and 0.27 m. high. The lowest is about 0.50 m. above the original soil which formed the floor of the passage. No trace was discovered of paving. At each entrance the lower exterior edges of the slanting roof-blocks are splayed to afford easier entrance. The passage is now lighted by a vesica-shaped aperture in the roof, 1.24 m. long and 0.35 m. wide, distant from the north end 3.34 m. I do not feel sure that this is not an accidental breaking away; but the roofing seems too firm at every other point to make this probable. No mortar was used in the construction of the passage, and the workmanship throughout is excellent. I owe to Dr. Dörpfeld the judgment that the whole is Greek and belongs to a good period.

What, then, was the purpose of this passage? If it had been a drain, it would surely have extended further, under and beyond the stage-structure; moreover, it is very much larger than a drain need have been. It is thus clear that its object was to make a way by which passage could be had unseen from behind the proscenium to the centre of the orchestra, or *vice versa*. It would thus supply the means for chorus or actors to appear suddenly in view of the audience in the orchestra, or to disappear just as suddenly. The notion that the passage was ever used by the chorus, may be dismissed. One of the most essential purposes of the *parodoi* was to furnish for the chorus an entrance to the orchestra. The effect produced by their appearance one by one from below would have been ridiculous. Extant plays and *scholia* afford abundant evidence to prove the impossibility of such a conception. The purpose of the passage, then, was to allow the actors to pass between the orchestra and their dressing-rooms in the rear of the proscenium. After his appearance, the actor may have kept his place in the orchestra or ascended a raised stage such as Vitruvius describes.

An important fact to be noted is that such a passage could have been employed only in particular cases. An actor who is represented as coming from palace or city or some foreign land could not possibly appear before the audience as if rising suddenly from the depths of the earth. Such an apparition must actually be a being from the lower world, imagined as returning to the light of day. The manner of entrance would be so clearly seen by the audience and would be so notable that it must at once suggest such an apparition. The device can have had no cause for existence, if it was not to contribute to what we call stage-effect, to heighten illusion; but illusion would have been utterly lost if an actor who came to herald the return of a king from Troy had been seen emerging from the earth.

Extant tragedy furnishes examples of such appearances. In the *Persians* of Aischylos, the chorus is urged by Atossa (v. 619, *seq.*) to call up the spirit of Darius. The chorus then accompany her libations with a long hymn of supplication to Darius and to the powers of the lower world (vv. 621-671). In v. 656, the King is implored: *ἰκοῦ τόνδ' ἐπ' ἄκρον κόρυμβον ὄχθου*. Darius appears. He first addresses the chorus, telling them how he has seen Atossa *τάφου πέλας* (v. 675), and has received her libations, and he further bids the chorus: *ὑμεῖς δὲ θρηνεῖτ' ἐγγυὺς ἐστῶτες τάφου* (v. 677). They have just called on him to rise above the mound that covers his tomb; now he finds them standing close by the tomb. He must appear therefore in the midst of them, and surely from below. The difficulty of placing the tomb upon the stage and grouping the chorus there instead of in the orchestra has always been evident. Such a passageway as that at Eretria would enable the actor who personated Darius to make his appearance much more naturally, from beneath the actual surface of the earth and in the midst of the chorus.

If we are to believe that actors as well as chorus had their places in the orchestra, the final catastrophe of the *Prometheus Bound* may have represented the disappearance of Prometheus and the Oceanides beneath its surface. They must, from the play, have shared the same fate, and together, whether in orchestra or on a stage. At Eretria the entrance to the passage is so small that its use by so large a group would certainly present great difficulties. It is possible also that in Sophokles' *Philoktetes*, and Euripides' *Kyklops*, the passageway may have served as the cave which made part of the scene. This, however, may well be deemed doubtful, and the best evidence is furnished by

the first two plays cited. The *steps of Charon* mentioned by Pollux (iv. 132) have appeared to us clearly for the first time at Eretria. Pollux's description of this part of the scenic adjuncts runs as follows: αἱ δὲ χαρώνειοι κλίμακες, κατὰ τὰς ἐκ τῶν ἐδωλίων καθόδους κείμεναι, τὰ εἶδωλα ἀπ' αὐτῶν ἀναπέμπουσιν. This gives but a confused notion of the position of the steps, and various opinions have been held on this point. But if we are to accept Pollux at all, and his is our only authority on the matter, these steps could surely have had no connection with a stage. The meaning of κατὰ τὰς ἐκ τῶν ἐδωλίων καθόδους is obscure, but seems as well suited to the situation of the steps in the Eretrian orchestra as to any other point in the orchestra. It is interesting to find Müller²² supporting his view, that the steps in question led up to the stage through some sort of trapdoor, with the words: *Man beachte auch, dass die Orchestra im griechischen Theater keine unterirdischen Gewölbe hatte wie sie sich im römischen Amphitheater finden.* Wilamowitz²³ seems almost to anticipate the discovery made at Eretria. Discussing the *Persians*, he writes: *Es ist mitten auf dem Tanzplatz eine Bühne, Estrade ist dem Deutschen wohl deutlicher, deren Stufen zu anfang die Sitze des Rathhauses, weiterhin die Stufen des Grabmonumentes vorstellen: aus ihr kommt Dareios hervor; der Schauspieler der als Bote bis 514 sprach, hat also Zeit und Gelegenheit gehabt, sich bis 687 umzukleiden und unter die Estrade zu gelangen: wie das geschieht ist nicht überliefert, und der Philologe kann sich das nicht reconstruieren.*

A further question involves the relation between these steps and the ἀναπίσματα. Pollux says of the latter (iv. 132): τὸ μὲν ἐστὶν ἐν τῇ σκηνῇ ὡς ποταμὸν ἀνελθεῖν ἢ τοιοῦτόν τι πρόσωπον, τὸ δὲ περὶ τοὺς ἀναβαθμούς ἀφ' ὧν ἀνέβαινον ἐρινύες. Perhaps the ἀναβαθμοί are identical with the *steps of Charon*, and with the steps found at Eretria; the Erinyes, as beings of the lower world, would naturally ascend in such a way. The ἀναπίσματα proper may then have involved only some additional machinery to be used in connection with the steps and passage.

If the underground passage at Eretria did serve the purpose described, it would be most natural to expect something similar in other theatres. Mr. Penrose²⁴ has suggested that the drain-canal in the theatre in

²² *Bühnenalterthümer*, 150, n. 4.

²³ *Die Bühne des Aischylos*, *Hermes*, xxi, 608.

²⁴ *Journal of Hellenic Studies*, viii, 272.

Athens may have been used also as a concealed way from one side of the stage to the other ; but, even if this were possible, the case would hardly be a parallel one. Clearer evidence however has recently come to light. Shortly after our work at Eretria was finished, news came that the Germans had made a similar discovery at Magnesia. The passage there, Dr. Dörpfeld informs me, has about the same extent and direction as ours, except that at the orchestra end it branches at right angles in both directions, thus taking the form of the letter T. At Magnesia, however, no steps have been discovered, and the opening into the orchestra is barely large enough for a man to pass. At Tralleis, also, there is a less perfect example. But both these passages, Dr. Dörpfeld thinks, are of Roman construction. He tells me, too, that the excavations at present in progress at the theatre of Argos have disclosed what seems to be something of like nature. More important than all these, however, is the evidence afforded by the theatre at Sikyon, where some supplemental excavations have been made during the past summer by Dr. M. L. Earle, a former member of the American School, who superintended the investigations at Sikyon in 1887.²⁵ Dr. Earle's preliminary report will be found below ; but I may touch briefly on the point most interesting in this relation. This is the stairway, in the theatre at Sikyon, which leads down into the subterranean passage just behind the late proscenium. The stairway seems to belong to the same period as the passage, which appears to be of Hellenic work. At the orchestra end there are no steps ; but here the passage widens out so as to make a much more spacious entrance than at Eretria. These two facts taken together with the great height of the passage, which would be unnecessary for a mere drain, go to prove that the purpose of the passage was the same as at Eretria. In all probability it served also as a drain ; but the two uses are not incompatible. It is certainly noteworthy that such closely similar discoveries have been made in theatres so far apart as the sites in Peloponnesos and in Euboea. With the progress of excavation in all parts of Greece and in Greek lands, further light may be expected with confidence.

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American School of Classical Studies,
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²⁵ *Papers of American School*, v, p. 20 (*JOURNAL*, v, p. 267 seq.).